

# National Renewable Energy Laboratory

## Solicitation for Letters of Interest (LOI) No. RCQ-3-33636

### “University Research and Development (R&D) for Future Generation Solar Electric Technologies”

#### REQUEST FOR LETTERS OF INTEREST

#### READ THIS DOCUMENT CAREFULLY

This solicitation is being conducted under the streamlined procedures for competitive Letters of Interest established by the National Renewable Energy Laboratory (NREL). NREL will select a LOI for potential subcontract award based on the following.

- All Statement of Work (SOW) requirements being met
- The best combination of:
  - Technical factors (based on qualitative merit criteria)
  - and
  - Evaluated cost

Issue Date: 06/27/03

Due Date: 08/22/03 – 5:00 p.m.  
(Mountain Time)

**\*\*Technical Questions must be received in writing (e-mail acceptable) no later than  
07/18/03\*\***

**1. Solicitation Type** Best Value Letters of Interest

***Submit responses to and request information from the NREL LOI Contact below***

**2. NREL LOI Contact** Liz Surek-Smith, Subcontract Administrator  
MS 2713

Submit LOI to and  
request information from  
the NREL LOI Contact

National Renewable Energy Laboratory  
1617 Cole Boulevard  
Golden, CO 80401-3393  
Phone: (303) 384-7354  
Fax: (303) 384-7329  
Email: [liz\\_surek@nrel.gov](mailto:liz_surek@nrel.gov)

Electronic (PDF) copies of forms, sample subcontract, and appendices can be found at:  
<http://www.nrel.gov/contracts/index.html>

## **Solicitation for Letters of Interest for the “University Research and Development (R&D) for Future Generation Solar Electric Technologies”**

### **3. Introduction**

The National Renewable Energy Laboratory (NREL) invites your submission of a response for a research project, entitled *University Research and Development (R&D) for Future-Generation Solar Electric Technologies*, in accordance with the requirements and conditions set forth in this document.

#### **Objectives**

The technical objectives are to conduct exploratory research for the development of innovative, future-generation solar electric technologies, using inorganic, organic, or inorganic/organic material combinations, having the potential for much higher efficiency, above 60%, and much lower cost, below \$100/square meter, than first- and second-generation photovoltaic technologies.

#### **Scope of Interest**

The *University R&D for Future-Generation Solar Electric Technologies* solicitation requests responses for the research and development of nonconventional approaches for achieving very high efficiency and low cost in solar electric technologies based on inorganic materials, organic materials, or organic/inorganic combinations.

### **4. Proposed subcontract award and period of performance**

NREL intends to award three to six or more subcontracts under this solicitation. The number of awards may vary based on the responses received and the availability of funds. NREL reserves the right to make any number of awards or none at all. We anticipate that the program funding available for all awards will be about \$2 million on an annual basis. There is no commitment by NREL to award a particular number of subcontracts or to award a particular dollar value for any subcontracts awarded.

We anticipate the NREL funding level per subcontract will range between \$200,000 and \$500,000 per 12-month period, with a maximum total for all subcontracts not to exceed \$2 million per year, for an expected period of performance of 3 years. All resultant subcontracts will be incrementally funded based on availability of fiscal year funds.

The proposed effort should be divided into distinct 12-month phases, with well-defined tasks, milestones, and deliverables under each phase. A decision point will be established for each resultant subcontract one month prior to the end of each phase (except for the end of the final phase) to determine the appropriateness of authorizing and funding the next phase. Continued funding for the subsequent phase will be based on research progress, availability of funds, and programmatic needs

5. **Competitive Solicited Letters of Interest using Best Value Selection**

This solicitation shall be conducted using Best Value Selection that results in the selection of LOIs for potential subcontract award that is most advantageous to NREL based on the best value combination of (a) evaluated qualitative merit and (b) evaluated cost of the LOIs submitted.

Best Value Selection is based on the premise that, if all LOIs are of approximately equal qualitative merit, award will be made to the LOIs with the lowest evaluated cost. However, NREL will consider selecting an LOI with a higher evaluated cost if the responder demonstrates the difference in cost is commensurate with the higher qualitative merit. Conversely, NREL will consider selecting an LOI with a lower evaluated qualitative merit if the cost differential between it and other LOIs warrant doing so.

6. **Qualification requirements**

The following criteria must be met by each responder to this Solicitation. NREL will eliminate, at its sole discretion, any response that does not meet the criteria below. **Responders failing to meet these criteria will not be evaluated for an award and will be considered non-responsive to this solicitation.**

- Each responder must be a U.S. university

7. **Qualitative Merit Criteria for Best Value Selection**

The scope of interest (see item 3) and the qualification requirements (see item 6) in this solicitation serve as NREL's baseline requirements that must be met by each LOI.

The qualitative merit criteria establish what NREL considers the technical factors valuable in an LOI. These qualitative merit criteria are performance-based and permit selection of the LOI's that provide higher qualitative merit for a reasonable, marginal increase in cost.

Each qualitative merit and its assigned weight are provided below:

**a. Technical Approach (60%) –**

- 1) The extent to which the proposed research gives significant progress, new insights, and new directions growing out of the previously-funded *Future Generation PV* or relevant research efforts.
- 2) The extent to which the research approach has been developed and potential problems have been anticipated in the proposed research, as well as the explanation and soundness of the proposed research to overcome the potential problems.

**b. Capability (40%) –**

- 1) Past performance in fields relevant to the proposed research as well as the resources, experience, and flexibility of the proposing team. Responders should have a strong record in their field relevant to their research response. Several university projects in the Future Generation PV solicitation acquired such a record partly as a result of their excellent performance in that project, and they are encouraged to submit responses in response to this solicitation. Companies, both large and small, may partner with universities, because the long-term goal is the commercialization of innovative third-generation solar electric technologies. Universities may also consider a partnership with non-U.S. universities, because this type of precommercialization research may strongly benefit from the global nature of this very high risk pursuit of technologies that might “leapfrog” conventional approaches and have a dramatic impact in the future solar electric marketplace. Universities may also consider a partnership with non-US universities, because they may have critically-needed expertise and because this type of precommercialization research may strongly benefit from the global nature of this very high risk pursuit of technologies that might “leapfrog” conventional approaches and have a dramatic impact in the future solar electric marketplace.
- 2) The Subcontractors funded by this program shall conduct their operations in an environmentally safe manner. The improvement of research operations to reduce waste and conduct R&D in a safe work environment may be elements in the proposed work effort.

**8. Cost evaluation for Best Value Selection**

After evaluation of the qualitative merit criteria the following cost evaluation will be used to determine the best value of the LOI in meeting the objectives of the solicitation.

The combined qualitative merit value will be considered substantially more important than the cost.

### **Cost Considerations**

- a. Reasonableness of proposed costs;
- b. Reasonableness of the total proposed and the individual cost elements that comprise the total cost;
- c. Responder's demonstrated understanding of the project based upon the proposed cost to perform the work;
- d. Reasonableness of the proposed cost in relation to the magnitude of the work to be performed.

**Note:** Responders may propose cost-sharing, however, no additional consideration will be given for cost-sharing.

### **9. Additional Factors for Evaluation**

In addition to the qualitative merit criteria above, each LOI will be evaluated against the following programmatic factors to determine the competitive range and final negotiation rank order. These factors are not weighted.

- Consideration will be given to diversity of methods and types of work proposed to provide maximum opportunity to advance the overall long-term objectives of the DOE Solar Energy Technology Program.

### **10. Evaluation process**

NREL will evaluate LOIs in two general steps:

#### **Step One—Initial Evaluation**

An initial evaluation will be performed to determine if all required information has been provided for an acceptable LOI. Responders may be contacted only for clarification purposes during the initial evaluation. Responders shall be notified if their LOI is determined not acceptable and the reasons for rejection will be provided. Unacceptable LOIs will be excluded from further consideration.

#### **Step Two—Discussion and Selection**

All acceptable LOIs will be evaluated against the scope of interest and the qualification requirements; the qualitative merit criteria, programmatic factors, and cost evaluation listed above. Responders selected through the best value selection process will be contacted with the intent to negotiate an acceptable Statement of Work, based on the Responder's LOI. Subsequently, NREL will issue a Request for Proposal for a technical and cost proposal based on this developed Statement of Work.

## 11. LOI preparation information

Your LOI response will determine your capability to participate in this procurement. The LOI response should be specific and complete in every detail. The LOI response should be prepared simply and economically, providing straightforward, concise delineation of capabilities necessary to satisfactorily perform the proposed project that meets the area of interest covered by this solicitation document.

- a. The response must include a **title page**, including the LOI title and number, name of your organization and principal investigator (with postal address, telephone and fax numbers, and email address). The title should be succinct and capture the essence of the response.
- b. Formatting instructions
  - A page is defined as one side of an 8 ½" x 11" sheet of paper.
  - Use a 12-point font.
  - Maintain at least 1-inch margins on all sides.
  - Copies may be either single or double sided.
- c. Responders should provide only the minimum amount of information required for proper evaluation. Keep your LOI as brief as possible and concentrate on substantive information. Follow the instructions below in preparing your LOI.
- d. **A technical response** in an original and 10 copies directed toward meeting the requirements of NREL's Statement of Work (Attachment 1) and qualitative merit criteria (see section 7 above). The technical response shall be organized in the following sections:
  1. Introductory statement of the problem, its history, and proposed research direction (Max. Two pages).
  2. Description of the proposed research (Max. Five pages). Note that figures can communicate important aspects of the proposed research.
  3. Description of capabilities (Max. Two pages). Description of past performance with a Future Generation PV contract or of research relevant to the proposed research. Describe resources, experience and flexibility of the proposing team for accomplishing the research targets.
  4. Brief statement of anticipated problems that the proposer recognizes and recommendations for how they may be overcome (Max. Two pages).

5. Statement of expected results and a proposed schedule for major project tasks (Max. Two pages). The proposed schedule for the R&D will include milestones, research targets, and deliverables. Milestones may relate to understanding developed as a result of the R&D on critical issues affecting the progress or redirection of the R&D. Quarterly technical reports shall constitute the principal deliverables but additional deliverables can be material samples or devices demonstrating the progress or status of the research effort.
6. Key References and Bibliography (Max. One page). Relevant references bearing on the proposed research topic or direction.

The total technical response shall not exceed 15 pages, including title page and references but not including forms listed in f and g below.

- e. Complete a **“Proposed Budget”** (Attachment A) in an original and ten (10) copies to submit with your LOI. The proposed budget should be broken down for each cost category and should be a reasonable estimate of proposed costs broken out for each Phase and a total for the three Phases.
- f. A completed **“Representations and Certifications”** form in an original and one (1) copy. The Representations and Certifications form can be found on NREL’s web site at: [http://www.nrel.gov/contracts/related\\_docs.html](http://www.nrel.gov/contracts/related_docs.html)
- g. A **cover letter** including a **summary of deviations/exceptions** (if any) to the subcontract schedule (sample subcontract schedule is included as part of this solicitation as Attachment B) and the standard terms and conditions and/or the intellectual property provisions (available at: [http://www.nrel.gov/contracts/related\\_docs.html](http://www.nrel.gov/contracts/related_docs.html)). The responder will explain any exceptions (including deviations and conditional assumptions) taken with respect to the subcontract schedule and terms and conditions. Any exceptions must contain sufficient amplification and justification to permit evaluation. Such exceptions will not, of themselves, automatically cause a response to be termed unacceptable. A large number of exceptions or one or more significant exceptions not providing any obvious benefit to the Department of Energy or NREL may, however, result in rejection of such response as unacceptable.
- i. This solicitation does not commit NREL to pay costs incurred in the preparation and submission of a response to this request for LOI.
- j. This solicitation does not allow the submittal of facsimile or electronic responses to this LOI.
- k. **Submit an original and ten (10) copies of your LOI.** Include Title Page, Technical Response, and Proposed Budget in each copy. (Representations and Certifications need only be submitted in an original and one (1) copy).

## 12. Solicitation Provisions

### a. Late submissions, modifications, and withdrawals of LOI's

LOI's, or modifications to them, received from qualified organizations after the latest date specified for receipt may be considered if received prior to selection, and NREL determines that there is a potential budget, technical, or other advantage, as compared to the other LOI's received. However, depending on the circumstances surrounding the late submission or modification, NREL may consider a late LOI to be an indication of the Respondent's performance capabilities, resulting in downgrading of the LOI by NREL evaluators in the technical evaluation process. An LOI may be withdrawn by written notice or telegram (including mailgram) received at any time before selection. LOI's may be withdrawn in person by a Responder or an authorized representative, if the representative's identity is made known and the representative signs a receipt for the LOI before selection.

### b. Restrictions on disclosure and use of data

Responders who include in their LOI's data that they do not want disclosed to the public for any purpose or used by the Government or NREL, except for evaluation purposes shall ---

1. Mark the title page with the following legend:  
"This LOI includes data that shall not be disclosed outside the Government or NREL and shall not be used or disclosed --- in whole or in part --- for any purpose other than to evaluate this LOI. If, however, a subcontract is awarded to this responder as a result of --- or in connection with --- the submission of this data, the Government or NREL shall have the right to disclose the data to the extent provided in the resulting subcontract. This restriction does not limit the Government or NREL's right to use information contained in this data if obtained from another source without restriction. The data subject to this restriction are contained on pages [insert page and line numbers or other identification of pages] of this LOI"; and



2. Mark each page of data it wishes to restrict with the following legend:  
“Use or disclosure of data contained on this page is subject to the restriction on the title page of this LOI.”

c. Notice of right to receive patent waiver (derived from DEAR 952.227-84) and technical data requirements

Responders (and their prospective lower-tier subcontractors) in accordance with applicable statutes and Department of Energy Acquisition Regulations, (derived from DEAR 952.227-84) have the right to request a waiver of all or any part of the rights of the United States in inventions conceived or first actually reduced to practice in performance of the subcontract that may be awarded as a result of this solicitation, in advance of or within thirty (30) days after the effective of subcontracting. Even where such advance waiver is not requested or the request is denied, the subcontractor will have a continuing right during the subcontract to request a waiver of the rights of the United States in identified, individual inventions.

Domestic small business firms, educational institutions, and domestic nonprofit organizations normally will receive the Patent rights clause --- retention by the subcontractor --- which permits the responder to retain title to subject inventions, except in subcontracts involving exceptional circumstances or intelligence activities. Therefore, domestic small business firms, educational institutions, and domestic nonprofit organizations normally need not request a waiver.

If a Responder’s response includes a lower-tier subcontract to another organization, that lower-tier organization’s business type will determine the applicable intellectual property provisions that will apply to the lower-tier subcontract. Note that a lower-tier subcontractor may apply for a patent waiver under the same conditions as the Responder.

Under a research, development, and demonstration project, the Department of Energy and NREL are unable to ascertain, prior to receipt of LOI’s, subsequent proposals, or performance of the project, their actual needs for technical data. It is believed that the requirements contained herein are the basic needs of the Department of Energy and NREL. However, if the Responder indicates in its LOI or subsequent proposal that proprietary data will be used or withheld under its proposed effort, the Government and NREL reserve the right to negotiate appropriate rights to the proprietary data. The appropriate rights may include “Limited Rights in Proprietary Data” and/or “Subcontractor Licensing.”

d. Disclaimer

NEITHER THE UNITED STATES; NOR THE DEPARTMENT OF ENERGY; NOR MIDWEST RESEARCH INSTITUTE, NATIONAL RENEWABLE ENERGY LABORATORY DIVISION; NOR ANY OF THEIR CONTRACTORS, SUBCONTRACTORS OR THEIR EMPLOYEES MAKE ANY WARRANTY, EXPRESS OR IMPLIED, OR ASSUME ANY LEGAL LIABILITY OR RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR USEFULNESS FOR ANY PURPOSE OF ANY OF THE TECHNICAL INFORMATION OR DATA ATTACHED OR OTHERWISE PROVIDED HEREIN AS REFERENCE MATERIAL.

e. Solicitation disputes

The General Accounting Office and the Department of Energy do not accept or rule on disputes for solicitations for Letters of Interest issued by Management and Operating Contractors for the Department of Energy (operators of Department of Energy National Laboratories). Should a responder have any concerns regarding the NREL solicitation process or selection determination, the responder may contact Marty Noland, Advocate for Commercial Practices, at (303) 384-7550. NREL will address each concern received from a responder on an individual basis.

f. **(Lower-Tier) Small Business Subcontracting Plan** (derived from FAR 52.219-9)

The selected Responders to this solicitation shall include in their proposals a lower-tier subcontracting plan that separately addresses lower-tier subcontracting with small business, small disadvantaged business, women-owned small business, and veteran-owned small business concerns and Hubzones. If the Responder is submitting an individual subcontract plan, the plan must separately address lower-tier subcontracting with small business, small disadvantaged business, women-owned small businesses, veteran-owned small businesses and Hubzones, with a separate part for the basic subcontract and separate parts for each option (if any). The plan shall be included in and made a part of the resultant subcontract. The lower-tier subcontracting plan shall be negotiated within the time specified by the NREL Subcontract Administrator. Failure to submit and negotiate a lower-tier subcontracting plan shall make the Responder ineligible for award of a subcontract (see NREL website).

### **NAICS Code and Small Business Size Standard**

- a.** The North American Industry Classification System (NAICS) code [formerly standard industrial classification (SIC)] for this solicitation is/are 54171.
- b.** The small business size standard for 54171 is 500 or fewer employees.

### **13. Solicitation Provisions --- Incorporated by Reference**

This solicitation incorporates one or more solicitation provisions by reference with the same force and effect as if they were given in full text. The following documents can be downloaded from the NREL **general access** website at [http://www.nrel.gov/contracts/related\\_docs.html](http://www.nrel.gov/contracts/related_docs.html) or the NREL LOI Contact (see item 2) will make full text available upon request.

- NREL Representations and Certifications for Subcontracts
- Appendix B-1, Standard Terms and Conditions for Subcontracts
- Appendix C-2 – Intellectual Property Provisions

## ATTACHMENT A

### Letters of Interest Proposed Budget Sheet for RCQ-3-33636 – [UNIVERSITY NAME]

Description		Phase I	Phase II	Phase III	3 Phase Total
A.	Direct Materials (\$)				
B.	Direct Labor (\$)				
C.	Labor Overhead & Fringe (\$)				
D.	Special Testing (\$)				
E.	Special Equipment <sup>+</sup>				
F.	Travel (\$) ++				
G.	Consultant(s)/Lower-tier Subcontractor(s) (\$)				
H.	Other Direct Costs (\$) (e.g., Publications, etc.)				
I.	G&A (\$) (Specify rate)				
J.	<b>TOTAL ESTIMATED COST (\$)</b>				
K.	PROFIT/FIXED FEE				
L.	Responder's Cost Share				
M.	NREL's Cost Share				
+	Capital Equipment Funds are not available for this solicitation. Equipment can be included in respondent's Cost Share				
++	Note that foreign travel requires pre approval from the Department of Energy and special reporting requirements.				